



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/892,810

06/27/2001

Bernard A. King-Smith

POU920000119US1

3513

7590

05/24/2004

Blanche E. Schiller, Esq.
HESLIN & ROTHENBERG, P.C.
5 Columbia Circle
Albany, NY 12203

EXAMINER

SORRELL, ERON J

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 05/24/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,810

Applicant(s)

KING-SMITH ET AL.

Examiner

Eron J Sorrell

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9,11-29,31-51, and 53-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9,11-29,31-51 and 53-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2182

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-12,16-19,21,23-32,36-39,43,45-54, and 58-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over the paper "Automatic TCP Buffer Tuning" by Mathis et al. (hereinafter "Mathis") in view of Braddy U.S. Patent No. 6,304,967).

3. Referring to method claim 1, system claim 21, and computer readable medium claim 43, Mathis teaches a method and system of tuning sockets of a clustered computing environment, the method and system comprising:

means for dynamically determining information relating to a current configuration of the computing environment (see 6th paragraph of section 1); and

means for setting one or more parameters of a socket of the computing environment based on the dynamically determined information (see 6th paragraph of section 1; Note the tuning of buffer sizes is the parameter setting).

Mathis fails to teach obtaining, by an application of the clustered computing environment, a value indicating a number of remote sockets to be opened.

Braddy teaches a clustered computing environment wherein it is obtained, by an application of the clustered computing environment, a value indicating a number of remote sockets to be opened (see paragraph bridging columns 9 and 10).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system and method of Mathis with the above teachings of Braddy such that it obtains, by an application of the clustered computing environment, a value indicating a number of remote sockets to be opened and sets one or more parameters of the computing environment based on the dynamically obtained information and the obtained value. One of ordinary skill in the art would have been motivated to make such modification in order to evenly distribute client requests among the server computer system as suggested by Braddy (see lines 55-67 of column 6).

4. Referring to method claims 3 and 4, system claims 23 and 24, and computer readable medium claims 45 and 46, Mathis teaches the one or more parameters comprise a size of a send buffer of the socket (see first and second paragraph of section 2.2) and the size of the receive buffer of the socket (see 3rd paragraph of section 2.1).

5. Referring to claim method claim 5, system claim 25, and computer readable medium claim 47, Mathis teaches the dynamically determining comprises determining a maximum amount of data that can be sent by the socket based on the current configuration (see 3rd paragraph of section 2.1).

6. Referring to method claims 6 and 8, system claim 26 and 28, and computer readable medium claim 48 and 50, Mathis teaches the information comprises information related to the network of the clustered computing environment coupled to the socket and information relating to the socket (see Mathis, 5th paragraph of section 1; Note the available memory is information related to the socket).

Art Unit: 2182

7. Referring to claim 7, system claim 27, and computer readable medium claim 49, Mathis teaches the information related to the network comprises at least one of the network adapter maximum segment size and the adapter transfer limit (see paragraph 4 of section 2.1; Note the system maximum buffer size is the maximum segment size).

8. Referring to method claim 9, system claim 29, and computer readable claim 51, Mathis teaches the information comprises at least one of a current socket send buffer size, a current socket receive buffer size, and a current maximum buffer limit (i.e. memory availability) (see 5th paragraph of section 1).

9. Referring to method claim 11, system claim 31, and computer readable medium claim 53, Mathis teaches the clustered computing environment includes an indeterminate number of sockets (see Mathis 4th paragraph of section 1; Note Examiner is relying on applicant's definition of "indeterminate" found in paragraph 0017 on page 5 of the instant application.)

10. Referring to method claim 12, system claim 32, and computer readable medium claim 54, Mathis teaches the computing environment includes a plurality of networks (see figure 2).

11. Referring to method claim 16, system claim 36, and computer readable medium claim 58, Mathis fails to teach the setting is performed by one node of the clustered computing environment being connected to by another node initiating a socket connection with the one node, wherein the socket is local to the one node.

Braddy teaches a method and system wherein the setting is performed by a node of the computing environment being connected to by another node initiating a socket connection with the node, wherein the socket is local to a node (see lines 54 of column 9 to lines 8 column 10).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system and method of Mathis with the teachings of Braddy such that the setting is performed by a node of the computing environment being connected to by another node initiating a socket connection with the node, wherein the socket is local to a node. One of ordinary skill in the art would have been motivated to make such modification in order to provide a central location to distribute, monitor and manage information requests as suggested by Braddy (see lines 18-35 of column 6).

Art Unit: 2182

12. Referring to method claim 17, system claim 37, and computer readable medium claim 59, Mathis discloses the size of the send buffer socket is based on the number of remote sockets to be opened (see paragraph 2 of section 1.3).

13. Referring to method claims 18 and 19, system claims 38 and 39, and computer readable medium claims 60 and 61, Mathis teaches the send and receive buffer of the socket based on the maximum buffer limit of the socket and the amount of data that can be received, respectively (see paragraph 3 of section 2.1 and paragraphs 1 and 2 of section 2.3).

14. Claims 2,20,22,40-42,44, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathis in view of Braddy as applied to claims 1,21, and 43 and further in view of Gupta et al. (U.S. Patent No. 6,405,252 hereinafter "Gupta").

15. Referring to method claim 2, system claim 22, and computer readable medium claim 44, the combination of Mathis and Braddy fails to teach that the dynamically determining is performed in response to opening the socket.

Gupta teaches a method and system wherein network configuration information is dynamically determined and is

Art Unit: 2182

performed in response to opening the socket (see lines 49-58 of column 14).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Mathis and Braddy with the teachings of Gupta such that the dynamically determining is performed in response to opening the socket. One of ordinary skill in the art would have been motivated to make such modifications because this is when the system available memory is changed.

16. Referring to method claim 20, see discussion of claims 1,2,6, and 8, as claim 20 is just a combination of those claims.

17. Referring to system claims 40-42, see discussion of claim 21, 22,26, and 28, as claims 40-42 are just combinations of those claims.

18. Referring to claim 62, see discussion of claim 43,44,48, and 50, as claim 62 is just a combination of those claims.

19. Claims 13-15, 33-35, and 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathis in view Braddy as

Art Unit: 2182

applied to claims 1,21, and 43 above and further in view of Eckley et al. (U.S. Patent No. 6,163,797 hereinafter "Eckley").

20. Referring to method claim 13, system claim 33, and computer readable claim 55, the combination of Mathis and Braddy fails to teach the setting is performed by a node of the clustered computing environment initiating a socket connection with another node of the clustered computing environment, and wherein the socket is local to the initiating node.

Eckley teaches, in an analogous method and system, that the setting is performed by a node of the clustered computing environment initiating a socket connection with another node of the clustered computing environment, and wherein the socket is local to the initiating node (see lines 58 of column 8 to line 10 of column 9).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Mathis and Braddy with the teaching of Eckley such that the setting is performed by a node of the computing environment initiating a socket connection with another node of the computing environment, and wherein the socket is local to the initiating node. One of ordinary skill in the art at the time of the applicant's invention would have been motivated to

Art Unit: 2182

make such modification in order for connections to a server to be initiated from a client machine as suggested by Eckley (see lines 58 of column 8 to line 10 of column 9).

21. Referring to method claim 14, system claim 34, and computer program claim 56, Mathis teaches the setting comprises setting a size a send buffer of the socket based on at least one of desired amount of data streaming through the send buffer, an amount of data that can be transmitted, and a maximum buffer limit of the socket (see first two paragraphs of section 2.2).

22. Referring to method claim 15, system claim 35, and computer readable medium claim 57, Mathis teaches the setting comprises setting a size of a receive buffer of the socket such that the size does not exceed a maximum buffer limit of the socket (see 3rd paragraph of section 2.1).

Response to Arguments

23. Applicant's arguments with respect to claims 1-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J Sorrell whose telephone number is 703 305-7800. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

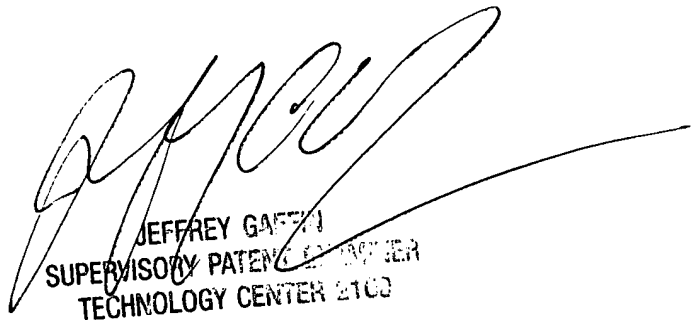
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be

Art Unit: 2182

reached on 703 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS
May 19, 2004



JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100